

Claims

- [c1] 1- Method for enhancing hair growth or diminishing hair loss or alopecia, in mammals, comprising administering topically to the skin a mixture of a nitric oxide (NO) donor such as nitrovasodilators like minoxidil-like compounds such as (Rogaine^{RTM}), nitroglycerin, L-arginine, isosorbide dinitrate, or nitroprusside, and a cyclic guanosine 3', 5'-monophosphate (cGMP) specific phosphodiesterase type 5 (PDE5) inhibitor such as sildenafil citrate (Viagra^{RTM}) in a dermatologically acceptable solution mix.
- [c2] 2-Method according to claim 1, wherein said topical dermatological compound is in the form of an aqueous solution or suspension, or in the form a gel, a shampoo, an ointment or a cream in a pharmaceutically acceptable dermatological vehicle or carrier to be applied to the mammalian skin.
- [c3] 3-Method according to claim 1, wherein the No releasing agent in said dermatological mix is a organic nitrate such as nitroglycerine.
- [c4] 4-Method according to claim 1, wherein the No releasing agent in said dermatological mix is a O-nitrosylated compound also known as O-nitroso compounds or in some cases organic nitrites.
- [c5] 5-Method according to claim 1, wherein the No releasing agent in said dermatological mix is a S-nitrosylated compound also known as S-nitroso compounds or S-nitrosothiols compounds such as glutathione.
- [c6] 6-Method according to claim 1, wherein the No releasing agent in said dermatological mix is S-nitrosylated derivatives of captopril.
- [c7] 7-Method according to claim 1, wherein the No releasing agent in said dermatological mix is S-nitrosylated-proteins/peptides.
- [c8] 8-Method according to claim 1, wherein the No releasing agent in said dermatological mix is S-nitrosylated oligosaccharides and polysaccharides.
- [c9] 9-Method according to claim 1, wherein the No releasing agent in said dermatological mix is a Nonoate compounds such as piperazines 2 and

diazeniumdiolates.

- [c10] 10-Method according to claim 1, wherein the No releasing agent in said dermatological mix is an inorganic nitroso compound such as sodium nitroprusside.
- [c11] 11-Method according to claim 1, wherein the No releasing agent in said dermatological mix is Sydnominines.
- [c12] 12-Method according to claim 1, wherein the No releasing agent in said dermatological mix is L-arginine (which does not release NO directly, but rather is an enzyme substrate which leads to the formation of nitric oxide in vivo).
- [c13] 13-Method according to claim 1, wherein the No releasing agent in said dermatological mix is 1,3-(nitrooxymethyl)phenyl 2-hydroxybenzoate isosorbide dinitrate.
- [c14] 14-Method according to claim 1, wherein the No releasing agent in said dermatological mix is pyrimidine (also known as Minoxidil or Rogaine^{RTM}).
- [c15] 15-Method according to claim 1, wherein the cGMP specific PDE-5 inhibitor in said dermatological mix is (sildenafil) also known as 1-[[3-(6,7dihydro -1 -methyl-7-oxo-3-propyl- 1 H-pyrazolo[4,3-d]pyrimidin-5-yl)-4 ethoxyphenyl]sulphonyl]-4-methylpiperazine.
- [c16] 16-Method according to claim 1, wherein the cGMP specific PDE-5 inhibitor in said dermatological mix is sildenafil citrate, (Viagra^{RTM}) also known as 1-[[3-(6,7dihydro -1 -methyl-7-oxo-3-propyl- 1 H-pyrazolo[4,3-d]pyrimidin-5-yl)-4 ethoxyphenyl]sulphonyl]-4-methylpiperazine citrate.
- [c17] 17-Method according to claim 1, wherein the cGMP specific PDE-5 inhibitor in said dermatological mix is 3-ethyl-5-[5-(4-ethylpiperazin-1 -ylsulphonyl)-2-n-propoxyphenyl]-2-(pyridin-2yl)methyl-2,6-dihydro-7H-pyrazolo[4,3-d]pyrimidin-7-one.
- [c18] 18-Method according to claim 1, wherein the cGMP specific PDE-5 inhibitor in said dermatological mix is 1-{6-ethoxy-5-[3-ethyl-6,7-dihydro-2-(2-

methoxyethyl)-7-oxo-2H-pyrazolo[4,3-d]pyrimidin-5-yl]-3 pyridylsulphonyl)-4-ethylpiperazine.

- [c19] 19-Method according to claim 1, wherein said topical dermatological mix is in the form of an aqueous solution and further contains one or more tonicity adjusting agents, one or more buffers and one or more antioxidants.
- [c20] 20- Method according to claim 1, wherein said topical dermatological mix further contains one or more antimicrobial agents.
- [c21] 21-The composition according to claim 1, wherein said dose is in pill form for oral administration.
- [c22] 22-The method according to claim 1, wherein said topical dermatological mix further contains one or more combinations of NO donors and cGMP PDE5 inhibitors.
- [c23] 23- The method according to claim 1, wherein said topical dermatological mix further contains one or more weight or volume percentage combinations of NO donors and cGMP PDE5 inhibitors.
- [c24] 24-A composition according to claim 1 wherein said composition also includes a pharmaceutically effective vehicle for said compound.
- [c25] 25-A composition according to claim 1 used in veterinary preparations or feeds to increase the rate of growth of fur (pelt) in certain fur bearing animals and to retard shedding and molting.